Serial No. 09/847,182

Filed: May 1, 2001

[0005a] Veinseal® 14000 is an effective, but expensive, anti-veining agent, costing about \$650 per ton, and in the operation of a modern foundry, producing tens of thousands of internal combustion engine blocks and cylinder heads per year, the use of such anti-veining agents at the minimum effective concentration of 5% by weight of the sand cores can cost as much as \$700,000 per year.

IN THE CLAIMS

- (Once Amended) A sand core for metal casting, comprising less than about 4% 1. by weight of a lithia-containing material about 1% or more by weight of Fe₂O₃ and the balance of core sand and a core sand binder, all formed into a sand core.
- (Once Amended) The sand core of claim 1 wherein the amount of Fe₂O₃ 2. comprises about 1% by weight.
- (Once Amended) A mixture for forming a sand core, comprising about 1.5% 5. 1.0% to about 3.5% by weight of a lithia-containing material, about 1% or more by weight of Fe₂O₃, and the balance of core sand and a core sand binder.
- (Once Amended) The mixture of claim 5 wherein the amount of Fe₂O₃ comprises 6. about 1% by weight.
- (Once Amended) A method of making a sand core for casting, comprising 10. uniformly mixing together a core sand, an effective amount of binder, about 1% to about 3.5% by weight of a lithia-containing material, and about 1% by weight of Fe₂O₃ as a core-forming material, and forming the core-forming material into a sand core.
- (Once Amended) The method of claim 10 wherein the lithia containing material 12. comprises 2-5% of LiO, 10-25% of TiO2, 15-25% of Al2O3, 10-20% of Fe3O4, and 60-70% of SiO₂.
- (Once Amended) A method of making a sand core for casting, comprising 13. uniformly mixing together a core sand, an effective amount of core sand binder, an anti-veining material comprising less that about 5% by weight of a lithia-containing material and about 1% or